

REMARKS/ARGUMENTS

Claims 1 - 29 are pending in the application. Claims 1 - 5 and 21 - 29 have been rejected under 35 U.S.C. Section 103(a). Claims 6 - 20 are withdrawn from consideration. Reconsideration of the claims in view of the following remarks is respectfully requested.

112 Rejections

Claims 2, 5, and 28 have been rejected under 35 U.S.C. Section 112. Claims 2 and 5 have been amended as suggested by the Examiner. Claim 28 has been amended to clarify that the step of isolating comprises the step of electrically isolating the signal.

103 Rejection

Claims 1 - 4, 21 - 24, 28, and 29 have been rejected under 35 U.S.C. Section 103(a) as unpatentable over Osorio, U.S. Patent 6,341,236 in view of Adkins, U.S. Patent 5,928,272. Claims 5 and 25 - 27 have been rejected as unpatentable over Osorio in view of Adkins, and further in view of Lo, U.S. Patent 5,738,104.

Claim 1 recites a method for non-invasive detection of a vagus nerve stimulation signal. The method includes the steps of applying electrodes to a patient in proximity to an implanted vagus nerve stimulator, detecting a vagus nerve stimulation pulse applied by the stimulator to the patient, and amplifying the detected vagus nerve stimulation pulse. The pulse is then filtered in a bandwidth selected to eliminate extraneous noise, and prolonged to allow sampling of the vagus nerve stimulation signal for an extended period of time.

The Osorio reference discloses an automatic neurostimulation device. The stimulation device comprises a sensor for sensing characteristics of the heart rate, and information derived from the sensor is used to determine whether vagus nerve stimulation is adversely affecting the heart. Referring to Figures 9 and 10, and also to column 11, line 18 through column 12, line 3, the signal that is monitored by the device is an EKG signal.

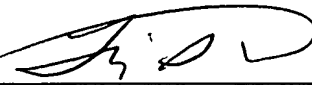
Adkins, similarly, discloses a device for controlling seizures in an epileptic patient. Referring to Fig. 2, an electrical signal 47 indicative of cardiac activity (such as an EKG or ECG signal) is monitored (see column 6, lines 54 through 58; column 9 lines 7 - 11). The device monitors a time rate of change of the patient's heart rate from cardiac activity to determine when to apply a stimulus to the cranial nerve.

Neither reference discloses a system for detecting and monitoring a vagus nerve stimulation pulse as recited in claim 1. Both of these references, rather, disclose systems in which a cardiac signal is monitored. These references, therefore, cannot be combined to provide the invention as recited in claims 1 - 5 and 21 - 29, and the Applicants respectfully request that the rejection of claims 1 - 5 and 21 - 29 under 35 U.S.C. Section 103 be withdrawn.

The Commissioner is authorized to charge any fees under 37 CFR § 1.17 that may be due on this application to Deposit Account 17-0055. The Commissioner is also authorized to treat this amendment and any future reply in this matter requiring a petition for an extension of time as incorporating a petition for extension of time for the appropriate length of time as provided by 37 CFR § 136(a)(3).

Respectfully submitted,

Tomas Kara, *et al.*

By: 

Terri S. Flynn
Quarles & Brady LLP
Reg. No. 41,756
Attorney for Applicant
411 East Wisconsin Avenue
Milwaukee, WI 53202-4497
414/277-5229